CASE STUDY

Performance Assurance for an ArcGIS Platform

AT A GLANCE

Industry
Local Government

Capability
Software Quality Engineering

Solution
Performance Testing

The Challenge
Establish performance assurance and baselines for the new ArcGIS enterprise platform.

The Outcome
- Validate performance under standard, high and extreme load
- Established baseline metrics for future performance tests
- Increased confidence in the ArcGIS platform reliability

THE CHALLENGE

A local government authority was running a large GIS transformation project to migrate to ArcGIS enterprise. This new GIS platform will provide access to infrastructure, property and historic flood data. KJR was engaged to conduct performance testing to provide confidence around user experience during periods of elevated activity.

User interactions tested included authentication, address searches, map navigation, overlays, zooming, panning and web tools. These actions generated complex map tile requests and viewport transformations. Without performance metrics the Council lacked assurance the platform would perform reliably during critical flood event usage spikes.

WHAT KJR DELIVERED

OUR ROLE:

Independent performance testing and assurance of a complex ArcGIS platform.

KEY CONTRIBUTIONS:

- Performance test plan
- JMeter-based automation scripts
- Custom Groovy scripting for map tile calculations
- Performance test execution
- Performance test execution report

CASE STUDY

Performance Assurance for an ArcGIS Platform

HOW WE DID IT

01 Discover & Assess

- Reviewed ArcGIS workflows and usage patterns
- Defined user journeys and spike scenarios
- Identified performance risks and dependencies

02 Assure & Validate

- Developed JMeter scripts simulating user behaviour
- Calculated map tile requests across zoom levels
- Validated overlays, panning and viewport transformations

03 Release with Confidence

- Executed load tests under typical, high and extreme usage scenarios
- Analysed results and identified performance constraints
- Delivered clear performance test reporting and baseline metrics

IMPACT & BUSINESS OUTCOMES

- ✓ **Reduced risk** during periods of increased platform usage

- ✓ **Improved confidence** in user experience performance

- ✓ **Established measurable** performance benchmarks

- ✓ **Validated scalability** of map interactions

- ✓ **Enabled repeatable** performance testing approach

WHY KJR

- Deep expertise in performance testing
- Independent, vendor-neutral quality assurance
- Proven capability in complex, data-driven platforms

TECHNOLOGY VALIDATED

- Esri ArcGIS Enterprise
- Saml2 Authentication
- JMeter
- Groovy scripting